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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/607,807	06/27/2003	Ram M. Rao	S01.12-0974/STL11261.00	6271

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SEAGATE TECHNOLOGY LLC C/O WESTMAN
CHAMPLIN & KELLY, P.A.
SUITE 1400
900 SECOND AVENUE SOUTH
MINNEAPOLIS, MN 55402-3319

EXAMINER

CASTRO, ANGEL A

ART UNIT

PAPER NUMBER

2627

DATE MAILED: 09/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/607,807

Applicant(s)

RAO ET AL.

Examiner

Angel A. Castro

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 July 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-5, 10-13 is/are allowed.
- 6) ☒ Claim(s) 6-9 and 14-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 6/27/03 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Species 2 in the reply filed on 7/17/06 is acknowledged.

Drawings

2. Figures 3, 3-1, 3-2 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

3. The disclosure is objected to because of the following informalities: In page 5, line 29, "130-2" should be changed to --130-3--. Correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

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The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is not clear from the claims 1 and 12 where the leading edge cavity step is located because in figure 6, leading edge cavity step 164-1 is located between the at least one stepped bearing surface 176 and at least one raised bearing surface 138-3. The leading edge cavity step from the recessed cavity surface (which is below the at least one raised bearing surface and the at least one stepped bearing surface) as claimed is located between the recessed cavity surface and the at least one raised bearing surface is not labeled in the figures.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Dorius et al (U.S. Pat. 6,069,769).

Regarding claims 1-2 and 12, as far as it is understood, Dorius et al discloses an air bearing slider (figure 5) comprising:

a slider body 500, a leading edge 540, a trailing edge 541 and at least one raised bearing surface 503 proximate to the trailing edge and at least one stepped bearing surface 511 recessed below the at least one raised bearing surface; and

a recessed cavity surface 520 recessed below the at least one raised bearing surface and the at least one stepped bearing surface and a leading edge cavity step (between element 511 and element 503, not labeled) from the recessed cavity surface to the at least one raised bearing surface to form an adaptive bearing surface where the recessed cavity is recessed a depth greater than approximately $1.0\text{ }\mu\text{m}$ below the at least one raised bearing surface (column 5, lines 57-60).

Regarding claims 3-4 and 13, Dorius et al discloses that the stepped bearing surface is recessed less than or equal to $0.5\text{ }\mu\text{m}$ from the at least one raised bearing surface (column 5, lines 52-61).

Regarding claim 10, Dorius et al further discloses opposed stepped cavity dam rails extending along a length of the slider between the leading and trailing edges of the slider (see figure 5).

8. Claims 1, 5 and 11-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Albrecht et al (U.S. Pat. 6,344,949).

Regarding claims 1 and 12-13, as far as it is understood, Albrecht et al discloses an air bearing slider (figure 4) comprising:

a slider body 100, a leading edge, a trailing edge and at least one raised bearing surface 110 proximate to the trailing edge and at least one stepped bearing surface 112 recessed below the at least one raised bearing surface; and

a recessed cavity surface 102 recessed below the at least one raised bearing surface and the at least one stepped bearing surface and a leading edge cavity step (not labeled) from the recessed cavity surface to the at least one raised bearing surface to form an adaptive bearing

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surface where the recessed cavity is recessed a depth greater than approximately 1.0 μm below the at least one raised bearing surface (column 8, lines 61-62).

Regarding claim 5, Albrecht et al discloses that the at least one raised bearing surface includes a raised bearing rail 114, 116 having a convergent channel formed therealong between opposed rail portions and the convergent channel includes the recessed cavity surface proximate to a trailing edge of the raised bearing rail to form the leading edge cavity step from the recessed cavity surface to the at least one raised bearing surface (see figure 4).

Regarding claim 11, Albrecht et al discloses that the at least one raised bearing surface includes opposed raised side portions 114, 116, and a raised cross portion 123 to form a convergent channel cavity and the leading edge cavity step from a recessed cavity surface of the convergent channel cavity to the raised cross portion (see figure 4).

Allowable Subject Matter

9. Claims 6-7, 8-9, 14-20 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Angel A. Castro whose telephone number is 571-272-7584. The examiner can normally be reached on Monday through Thursday, 8 AM to 6 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa T. Nguyen can be reached on 571-272-7579. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

A handwritten signature in black ink that reads "Angel Castro" followed by a stylized capital "C".

Angel Castro, Ph.D.